[redacted]

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

September 24, 2020

REPLY TO THE ATTENTION OF:
S-6J

MEMORANDUM

FROM: Anita L. Boseman, On-Scene Coordinator
Emergency Response Section 4

THRU: Samuel F. Borries, Chief
Emergency Response Branch 2

TO: Douglas Ballotti, Director
Superfund & Emergency Management Division

SUBJECT: ACTION MEMORANDUM – Request for Approval and Funding for a Time-Critical Removal Action and a 12 month exemption at the River Park Arsenic Drinking Water Site, Rochester, Fulton County, Indiana (SSID #C5BE)

I. PURPOSE

The purpose of this Action Memorandum is to confirm verbal approvals for emergency expenditures and to request approval of an additional expenditure for mitigation of threats to public health, welfare and the environment at the River Park Arsenic Drinking Water Site, Rochester, Fulton County, Indiana. On April 15, 2016 the Emergency Response Branch 2 Chief, verbally approved a $9,999 emergency expenditure, and on May 24, 2018 the Emergency Response Branch 2 Chief verbally approved an additional $10,000, for the provision of bottled water to residents at the Site. On June 24, 2020, the Emergency Response Branch Chiefs verbally approved $3,000 to continue provisions of bottled water to affected residents at the Site, This Action Memorandum requests your approval to expend up to an additional $674,400, for a total of $697,399, to mitigate the threat to public health, welfare, and the environment posed by the presence of elevated arsenic levels in private drinking water.

The actions proposed herein will mitigate the threats by providing temporary bottled water and installing water treatment systems for residences with arsenic in private wells above or near the EPA Tapwater Removal Management Level (RML) and monitoring the systems for 12 months to ensure effectiveness. The Site is in a mixed agricultural and residential area. The Indiana State Department of Health (ISDH) and the Fulton County Health Department (FCHD) detected arsenic levels exceeding the RML, posing a public health hazard to the residents. Therefore, due to the public health threats at the Site, EPA requires this Removal Action be classified as Time-Critical.

The United States Environmental Protection Agency (EPA) documented elevated levels of arsenic in the drinking water at the Site. Arsenic is a hazardous substance as defined by Section 101(4) of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA).

Response actions will be conducted in accordance with Section 104(a) of CERCLA, 42 United States Code (U.S.C.) § 9604(a), and 40 C.F.R. § 300.415(b)(2) of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) to abate or eliminate the immediate threats posed to public health and/or the environment.

The project will require approximately 90 On-Site working days to complete including the installation of appropriate systems in each home and 1-year of monitoring to ensure effectiveness of the systems. There are no nationally significant, or precedent-setting issues associated with the Site. The Site is not on the National Priorities List (NPL).

II. SITE CONDITIONS AND BACKGROUND

CERCLIS ID: INN 000 508 956
RCRA ID: None
Category: Time-Critical Removal Action

A. Site Description

1. Physical Location

The River Park Arsenic Drinking Water Site is in Rochester, Fulton County, Indiana 46975. The residential population consists of both children and elderly occupants (Figure 1 - Site Location Map). The Site consists of four mobile homes at the River Park Mobile Home Park (River Park MHP) and six private residences in the surrounding area. The River Park MHP shares a single well maintained by the property owner. The six private residences each have their own privately maintained well.

The geographical coordinates for the Site are 41°07'25.8" North latitude and 86°10'19.6" West longitude. The Site is in a mixed agricultural and residential area. The Site is bordered on the north by the Tippecanoe River and farmland beyond; to the east by the Tippecanoe River; to the south by US Route 25 and farmland beyond; and to the west by the Tippecanoe River and farmland beyond, and residential properties beyond. Adjacent to the River Park MHP is another Mobile Home Park, named River View. There are no physical barriers between adjacent properties just an unpaved unnamed access road through the properties.

2. Site Characteristics

FCHD per suggestion of ISDH contacted the Agency for Toxic Substances and Disease Registry (ATSDR) due to high concentrations of arsenic in the drinking water above the EPA Tapwater

RML of 5.2 µg/L in the River Park MHP community. At the time of the Health Departments drinking water evaluation, the River Park MHP community consisted of at least 12 homes with more than 25 residents including small children and elderly. Currently, River Park MHP has 4 mobile homes occupied and children and elderly individuals reside within them.

On March 4, 2016, Fulton County Health Department, requested EPA assistance in addressing elevated arsenic levels in drinking water at the Site. The location of the MHP has historically been the location of an apple orchard. Also, the Natural Resource Conservation Service in Fulton County provided an aerial photo, June 1963, depicting an apple orchard on the property prior to the MHP. Lead arsenate was historically first used in apple orchards in the 1890s to combat the codling moth, Cydia pomonella (L.), a destructive insect pest. This pesticide was very popular among farmers because of its effectiveness, low cost, ease of use, and persistence. This practice continued until the 1950's. Therefore, old agricultural soils may contain high levels of arsenic resulting from its former agricultural uses.

3. Removal Site evaluation

In 2013 and 2015, ISDH detected arsenic in the water supply at the River Park MHP exceeding the EPA RML of 5.2 µg/L for drinking water. Subsequent ISDH sampling on June 23, 2015 and November 30, 2015 detected arsenic at 34.4 µg/L and 12.6 µg/L.

In January 2016, FCHD and ISDH conducted drinking water sampling at residences surrounding the River Park MHP. Private wells located adjacent to the River Park MHP; and north of the River Park MHP across the Tippecanoe River, had arsenic levels exceeding the RML. On March 4, 2016, FCHD contacted ATSDR for assistance.

On March 22, 2016, EPA accompanied ISDH and FCHD to conduct additional sampling of the River Park MHP water supply and the two private wells adjacent to the River Park MHP that previously exhibited high arsenic levels. Also, a water sample was collected from a third private well located near the River Park MHP. Water and sediment samples were collected from each of the two ponds west of the affected wells and the Tippecanoe River. Arsenic concentrations at the River Park MHP and two previously sampled private wells were above the EPA RML for arsenic.

From April through May 2016, EPA with assistance from FCHD, obtained consent agreements to access private residential properties to collect water, sediment and soil samples. In May and June 2016, EPA collected 35 drinking water samples from both the River Park MHP and the private residences including five duplicates.

The sampling results are as follow:

May 3 and 26, 2016: Drinking Water

- The sample results for four River Park MHP lots and six residences detected arsenic at concentrations exceeding EPA's Tapwater RML of 5.2 µg/L. Arsenic levels were detected as high as 14 µg/L.

In April 2016, EPA commenced providing drinking water to affected residents at the Site. EPA also collected 19 soil borings in the former apple orchard area that is the suspected source of arsenic, and 3 soil borings in the community well area of the River Park MHP. Also, when EPA obtained permission from the owners, surface soil samples were collected from the vegetable gardens of two additional properties that were not previously sampled during the initial assessment.

On August 6, 2019, EPA and ISDH collected drinking water and arsenic speciation sampling. The goal of collecting resident water samples for Arsenic speciation analyses was necessary to determine the ratio of Arsenite (As III) to Arsenate (As V) in the water in order to further assess potential water treatment system options. As III and As V are two species of inorganic Arsenic that can impact groundwater. As V is a negatively charged anion and As III has no charge. In general, surface waters contain As V while reductive groundwaters contain As III. As V is much easier treat and remove from drinking water due to its charge compared to the uncharged As III. Municipal drinking water systems have enough free chlorine in their water treatment system to convert As III to As V. Homes supplied directly by well water have limited options for treatment as there tends to be As III versus As V in groundwater.

August 6, 2019, EPA and ISDH: Drinking Water and Arsenic Speciation

EPA

Arsenic speciation samples were collected from six private homes, four River Park MHP residences and the well pump house for the River Park MHP.

- The sample results detected As III ranging from 2.95µg/L to 14.5µg/L and As V ranging from 1.99 µg/L to 16.4 µg/L.
- Sample results showed an average As III percentage of total inorganic arsenic of 57.6%, with a range of 27.1% to 85.9%. Speciation results are summarized in Appendix B, Table 1 of the Rochester Speciation Letter Report.
- Additionally, sample results detected total arsenic ranging from 10.7µg/L to 22.4µg/L exceeding the EPA Tapwater RML of 5.2 µg/L.

ISDH

- One drinking water sample collected from a private residence, detected total arsenic at 9.8µg/L exceeding the EPA Tapwater RML of 5.2µg/L.

4. Release or threatened release into the environment of a hazardous substance, or pollutant, or contaminant

The Site residential wells contain arsenic at concentrations exceeding the EPA Tapwater RML. Therefore, actual contamination of the drinking water exists. One residential property has arsenic in the soil. A release of hazardous substances, pollutants, or contaminants is present at the Site. Most of the residences and commercial businesses within the study area use private wells as a drinking water source. Providing a clean source of drinking water will depend on arsenic speciation to determine the appropriate water treatment unit. Arsenic III, trivalent arsenite

(As (III)) or/and Arsenic V, arsenate (As(V)) have been identified at the Site. Trivalent arsenic is generally more difficult to remove from water than pentavalent arsenic. In addition to being more difficult to remove, trivalent arsenic also tends to be more toxic than the pentavalent form. However, trivalent arsenic can be converted to pentavalent arsenic in the presence of an oxidant such as chlorine, then treated to reduce the presence of pentavalent arsenic.

Three possible treatment options have been identified to address arsenic contaminated drinking water, including: 1) Reverse Osmosis (RO) membranes with an advanced filter, 2) Activated Alumina (AA) filters, and 3) Ion Exchange (IX) systems. The systems considered would be installed in each residence as whole house or point of use (POU) systems. The treatment systems proposed in the memo are in some cases temporary solutions for the affected residences. In order to optimize performance of all treatment systems, trivalent arsenic should be converted to pentavalent arsenic to facilitate removal. The systems will be monitored for 1 year to ensure effectiveness.

5. NPL Status

The River Park Arsenic Drinking Water Site is neither on nor proposed for the National Priority List (NPL).

6. Maps, pictures and other graphic representations

Figure 1: Site Location Map
Figure 2: Site Layout Map

7. Environmental Justice Analysis

An Environmental Justice (EJ) analysis for the Site is contained in Attachment 1. Screening of the area used Region 5's EJ Screen Tool. Region 5 reviewed the environmental and demographic data for the area surrounding the Site at 4684 North State Road 25, Rochester, Fulton County, Indiana 46975, and determined there is a high potential for EJ concerns at this location.

B. Other Actions to Date

1. Previous actions

This Action Memo documents previous investigation and assessments in the Site Conditions and Background section above.

2. Current actions

EPA is providing bottled drinking water delivery service to the six privately owned homes and one MHP residence with arsenic near and above the EPA Tapwater RML of 5.2 µg/L. The owner of the River Park Properties, LLC is providing bottled water to the three remaining MHP residences.

C. State and Local Authorities Role

In March 2016, the Indiana State Department of Health and Fulton County Health Department called EPA requesting assistance to investigate the threat to public health posed by the presence of elevated levels of arsenic in the drinking water of residents in Rochester, Fulton County, Indiana. ISDH issued an Emergency Order to the owner of the River Park Mobile Home Park on October 14, 2015, (ISDH 2015) due to the elevated arsenic concentrations.

On September 7, 2018, ISDH informed EPA that the River Park MHP has four occupied mobile homes and thereby no longer meets the definition of a mobile home community. Therefore, ISDH closed their case regarding arsenic at the MHP. Children reside in the remaining mobile homes.

III. THREATS TO PUBLIC HEALTH, WELFARE, OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES

The conditions at the River Park Arsenic Drinking Water Site present a threat to the public health, or welfare and the environment, and meet the criteria for a Time-Critical Removal Action provided for in the NCP, 40 C.F.R. § 300.415(b)(2). These criteria include, but are not limited to, the following:

300.415(b)(2)(i) - Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants;

Removal assessment activities documented the exposure of human populations to arsenic through groundwater from residential wells in the area at concentrations exceeding the RML limit (5.2 ug/L). From 2013 to 2016, arsenic levels ranged between Non-Detect (ND) to 34.4 ug/L. The documented presence of these contaminants in potable wells indicates complete exposure pathways via the ingestion of drinking water, as well as dermal exposure via the regular use of water for bathing and household tasks. One soil boring sample identified a concentration of 186 milligrams per kilogram (mg/kg) of arsenic, exceeding EPA's Residential Soil RML for arsenic of 68 mg/kg. The River Park MHP and the privately owned residences have vegetable and flower gardens.

The toxicological effects of arsenic have been studied by the Agency for Toxic Substances and Disease Registry (ATSDR). Toxicological information is provided below.

Arsenic - *Arsenic is a naturally occurring element that is widely distributed in the Earth's crust. Arsenic is classified chemically as a metalloid, having both properties of a metal and a nonmetal; however, it is frequently referred to as a metal. Elemental arsenic (sometimes referred to as metallic arsenic) is a steel grey solid material. However, arsenic is usually found in the environment combined with other elements such as oxygen, chlorine, and sulfur. Arsenic combined with these elements is called inorganic arsenic. Arsenic combined with carbon and hydrogen is referred to as organic arsenic. sugar, protein, and fat.*

Inorganic arsenic has been recognized as a human poison since ancient times, and large oral doses (above 60,000 ppb in water which is 10,000 times higher than 80% of U.S. drinking water arsenic levels) can result in death. If you swallow lower levels of inorganic arsenic (ranging from about 300 to 30,000 ppb in water; 100–10,000 times higher than most U.S. drinking water levels), you may experience irritation of your stomach and intestines, with symptoms such as stomachache, nausea, vomiting, and diarrhea. Other affects you might experience from swallowing inorganic arsenic include decreased production of red and white blood cells, which may cause fatigue, abnormal heart rhythm, blood-vessel damage resulting in bruising, and impaired nerve function causing a "pins and needles" sensation in your hands and feet.

Perhaps the single-most characteristic effect of long-term oral exposure to inorganic arsenic is a pattern of skin changes. These include patches of darkened skin and the appearance of small "corns" or "warts" on the palms, soles, and torso, and are often associated with changes in the blood vessels of the skin. Skin cancer may also develop. Swallowing arsenic has also been reported to increase the risk of cancer in the liver, bladder, and lungs. The Department of Health and Human Services (DHHS) has determined that inorganic arsenic is known to be a human carcinogen (a chemical that causes cancer). The International Agency for Research on Cancer (IARC) has determined that inorganic arsenic is carcinogenic to humans. EPA also has classified inorganic arsenic as a known human carcinogen.

If you breathe high levels of inorganic arsenic, then you are likely to experience a sore throat and irritated lungs. You may also develop some of the skin effects mentioned above. The exposure level that produces these effects is uncertain, but it is probably above 100 micrograms of arsenic per cubic meter (µg/m3) for a brief exposure. Longer exposure at lower concentrations can lead to skin effects, and to circulatory and peripheral nervous disorders. There are some data suggesting that inhalation of inorganic arsenic may also interfere with normal fetal development, although this is not certain. An important concern is the ability of inhaled inorganic arsenic to increase the risk of lung cancer. This has been seen mostly in workers exposed to arsenic at smelters, mines, and chemical factories, but also in residents living near smelters and arsenical chemical factories. People who live near waste sites with arsenic may have an increased risk of lung cancer as well.

If you have direct skin contact with high concentrations of inorganic arsenic compounds, your skin may become irritated, with some redness and swelling. However, it does not appear that skin contact is likely to lead to any serious internal effects.

Almost no information is available on the effects of organic arsenic compounds in humans. Studies in animals show that most simple organic arsenic compounds (such as methyl and dimethyl compounds) are less toxic than the inorganic forms. In animals, ingestion of methyl compounds can result in diarrhea, and lifetime exposure can damage the kidneys. Lifetime exposure to dimethyl compounds can damage the urinary bladder and the kidneys.

Children are exposed to arsenic in many of the same ways that adults are. Since arsenic is found in the soil, water, food, and air, children may take in arsenic in the air they breathe, the water they drink, and the food they eat. Since children tend to eat or drink less of a variety of foods and beverages than do adults, ingestion of contaminated food or juice or infant formula made with

arsenic-contaminated water may represent a significant source of exposure. In addition, since children often play in the soil and put their hands in their mouths and sometimes intentionally eat soil, ingestion of contaminated soil may be a more important source of arsenic exposure for children than for adults. In areas of the United States where natural levels of arsenic in the soil and water are high, or in areas in and around contaminated waste sites, exposure of children to arsenic through ingestion of soil and water may be significant. In addition, contact with adults who are wearing clothes contaminated with arsenic (e.g., with dust from copper- or lead-smelting factories, from wood-treating or pesticide application, or from arsenic-treated wood) could be a source of exposure. Because of the tendency of children to taste things that they find, accidental poisoning from ingestion of pesticides is also a possibility. Thus, although most of the exposure pathways for children are the same as those for adults, children may be at a higher risk of exposure because of normal hand-to-mouth activity.

Children who are exposed to inorganic arsenic may have many of the same effects as adults, including irritation of the stomach and intestines, blood vessel damage, skin changes, and reduced nerve function. Thus, all health effects observed in adults are of potential concern in children. There is also some evidence that suggests that long-term exposure to inorganic arsenic in children may result in lower IQ scores.

There is some evidence that exposure to arsenic in early life (including gestation and early childhood) may increase mortality in young adults.

There is some evidence that inhaled or ingested inorganic arsenic can injure pregnant women or their unborn babies, although the studies are not definitive. Studies in animals show that large doses of inorganic arsenic that cause illness in pregnant females can also cause low birth weight, fetal malformations, and even fetal death. Arsenic can cross the placenta and has been found in fetal tissues. Arsenic is found at low levels in breast milk. (ATSDR 2007).

Arsenite versus Arsenate
Arsenite (As III) and Arsenate (As V) are two species of inorganic Arsenic that can impact the groundwater. As V is a negatively charged anion and As III has no charge. In general, surface waters contain As V while reductive groundwaters contain As III. As V is much easier to treat and remove from drinking water due to its charge compared to the uncharged As III. Municipal drinking water systems have enough free chlorine in their water treatment system to convert As III to As V. Homes supplied directly by well water have limited options for treatment as there tends to be As III versus As V in groundwater.

300.415(b)(2)(ii) - Actual or potential exposure to contamination of drinking water supplies or sensitive eco systems;

Removal assessment activities documented the presence of arsenic in tapwater at concentrations exceeding the RML and potable water above the RML. The documented presence of these contaminants in potable wells indicates complete exposure pathways via the ingestion of drinking water, as well as dermal exposure via the regular use of water for bathing and household tasks. In addition to the drinking water threat, the Tippecanoe River is located within

100 yards of the site, in the direction of groundwater flow. Arsenic contamination can have long lasting impacts on sensitive ecosystems in and around the Tippecanoe.

300.415(b)(2)(vii) - The availability of other appropriate federal or state response mechanisms to respond to the release;

Local and State agencies do not have the resources to respond to this Site. Fulton County Health Department and Indiana State Department of Health have requested EPA assistance with arsenic contamination in groundwater at and around the River Park MHP. If left in current conditions, contamination in potable wells at and around the River Park MHP will continue to have arsenic levels above the Tapwater RML and cause undue hardship and health ramifications for the residents.

IV. ENDANGERMENT DETERMINATION

Given the conditions at the Site, the nature of the confirmed hazardous substances, and the potential exposure pathways described in Sections II and III above, actual or threatened releases of hazardous substances from this Site, if not addressed by implementing the response actions selected in this Action Memorandum, may present an imminent and substantial endangerment to public health, or welfare, or the environment.

V. PROPOSED ACTIONS AND ESTIMATED COSTS

A. Proposed Actions

1. Proposed action description

The response actions described in this memorandum directly address actual or potential releases of hazardous substances on Site, which may pose an imminent and substantial endangerment to public health, or welfare, or the environment. The OSC proposes the following removal activities on the Site:

a. Continue to provide bottled water delivery to homes with contaminated wells until an alternative clean water source is provided;

b. Prepare and implement Site planning documents (e.g. Health and Safety Plan, Work Plan, Sampling and Analysis Plan), Site security measures, if necessary, staging/support areas.

c. Evaluate options for implementing an alternative water supply, including consultation with ATSDR and ERT on implementation on the following options:

Option 1: provide whole house water treatment units at each home with contaminated well water that are at and near the RMLs for arsenic. The property owner will be responsible for maintenance of the water treatment units;

Option 2: provide point-of-use treatment units at each home with contaminated well water. The property owner will be responsible for maintenance of the treatment units;

d. Provide whole house treatment units or an alternative water supply to residences with contaminated wells using one of the two options, or a combination of options, evaluated above;

e. Monitor effectiveness of implemented remedy by conducting residential well sampling at homes with treatment units for a period not to exceed 12 months after installation is complete;

f. Take any other response action to address any release or threatened release of a hazardous substance, pollutant or contaminant that the EPA OSC determines may pose an imminent and substantial endangerment to public health, or the environment.

Off-Site Rule

All hazardous substances, pollutants, or contaminants removed off-site pursuant to this removal action for treatment, storage, and disposal shall be treated, stored, or disposed of at a facility in compliance, as determined by EPA, with the EPA Off-Site Rule, 40 C.F.R. § 300.440.

This removal action will be conducted in a manner not inconsistent with the NCP. The OSC will initiate planning for provision of post-removal Site control consistent with the provisions of Section 300.415(l) of the NCP. The threats posed by uncontrolled substances considered hazardous meet the criteria listed in NCP § 300.415(b)(2), and the response actions proposed herein are consistent with any long-term remedial actions which may be required.

2. Contribution to remedial performance:

The proposed action will not impede future actions based on available information.

3. Engineering Evaluation/Cost Analysis (EE/CA)

Not applicable.

4. Applicable or Relevant and Appropriate Requirements (ARARs)

EPA will comply with all applicable, relevant, and appropriate requirements (ARARs) of Federal and State laws to the extent practicable, considering the exigencies of the circumstances.

Federal

Waste is anticipated to be generated during this removal action, therefore the following Federal ARARs will be met.

1. Hazardous substances, pollutants or contaminants removed off-site pursuant to this time-critical response action for treatment, storage and disposal shall be treated, stored, or disposed at a facility in compliance, as determined by EPA, with the EPA Off-Site Rule, 40 C.F.R. § 300.440.
2. Subtitle D of RCRA, Section 1008 and Section 4001, et seq., 42 USC § 691, et seq., regulates solid waste.
3. 49 U.S.C. § 5101 et seq. regulates the transportation of hazardous waste and hazardous substances by aircraft, railcars, vessels, and motor vehicles to or from a site.
4. 29 CFR § 1910 promulgates occupational safety and health standards for hazardous waste operations and emergency response. It regulates cleanup operations at uncontrolled hazardous waste sites.

State

On August 21, 2019, Anita L. Boseman, On-Scene Coordinator, sent a request to Rex Osborn, IDEM to identify all State ARARs for the proposed removal action at the Site.

In IDEM's response, no specific ARARs governing EPA's removal action were identified, however an Alternate Water Supply Nonrule Policy Document may be of use: https://www.in.gov/idem/files/nrpd_waste-0066.pdf.

5. Project Schedule

The removal activities are expected to require 90 On-Site working days to complete.

6. Disproportionate Funding

The response actions described in this memorandum directly address the actual or threatened release at the Site of hazardous substances, pollutants, or of contaminants, which may pose an imminent and substantial endangerment to public health, or welfare, or the environment. These response actions do not impose a disproportionate burden on the affected property to which the property contributes to the conditions being addressed.

B. Removal Action Project Ceiling Estimate - Extramural Costs:

The detailed cleanup contractor cost is presented in Attachment 3 and the Independent Government Cost Estimate is presented in Attachment 4. Estimated project costs are summarized below:

Regional Removal Allowance Costs:	
Total Cleanup Contractor Costs	$464,100.00
(Includes a 20% contingency)	
(Emergency Action providing drinking water to residents)	$ 22,999.00

Other Extramural Costs Not Funded from the Regional Allowance:	
Total START, including multiplier costs	$146,900.00
Subtotal, Extramural Costs	$633,999.00
Extramural Costs Contingency (10% of Subtotal, Extramural Costs rounded to nearest thousand)	$ 63,400.00
TOTAL REMOVAL ACTION PROJECT CEILING	**$697,399.00**

VI. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NO ACTION TAKEN

Given the site conditions, the nature of the hazardous substances and pollutants or contaminants documented on site, and the potential exposure pathways to nearby populations described in Section II, III, IV, and V above, actual or threatened releases of hazardous substances and pollutants or contaminants from this Site, if not addressed by implementing or delaying the response actions selected in this Action Memorandum, may present an imminent and substantial endangerment to public health, welfare, or the environment, increasing the potential that hazardous substances will be released, thereby threatening the adjacent population and the environment.

VII. OUTSTANDING POLICY ISSUES

A national EPA policy (SEMS 941198) regarding providing alternative water supply as part of Superfund response actions was updated and revised in 2010. The proposed action will comply with these policies, as applicable.

VIII. ENFORCEMENT

For administrative purposes, information concerning the enforcement strategy for this Site is contained in the Confidential Enforcement Addendum.

The total EPA costs for this removal action based on full-cost accounting practices that will be eligible for cost recovery are estimated to be $1,360,667. *

($697,399.00 + $60,000) + (79.65% x 757,399.00) = $1,360,667.00

*

Direct Costs include direct extramural costs and direct intramural costs. Indirect costs are calculated based on an estimated indirect cost rate expressed as a percentage of Site-specific direct costs, consistent with the full cost accounting methodology effective October 2, 2000. These estimates do not include pre-judgment interest, do not take into account other enforcement costs, including Department of Justice costs, and may be adjusted during the course of a removal action. The estimates are for illustrative purposes only and their use is not intended to create any rights for responsible parties. Neither the lack of a total cost estimate nor deviation of actual total costs from this estimate will affect the United States' right to cost recovery.

IX. RECOMMENDATION

This decision document represents the selected removal action for the River Park Arsenic Drinking Site, Rochester, Fulton County, Indiana. This document has been developed in accordance with CERCLA, as amended, and is not inconsistent with the NCP. This decision is based on the Administrative Record for the Site. The Site meets the NCP criteria for a time-critical removal action in 40 C.F.R. § 300.415 (b), and I recommend your approval of the proposed removal action.

The total estimated project ceiling, if approved, will be $697,399.00. You may indicate your decision by signing below.

9/24/2020

APPROVE: X _____

Douglas Ballotti, Director
Superfund & Emergency Management Division
Signed by: DOUGLAS BALLOTTI

DISAPPROVE: X _____

Douglas Ballotti, Director
Superfund & Emergency Management Division

Enforcement Addendum – Confidential

Figures:

1. Site Location Map
2. Site Layout Map

Attachments:

1. Environmental Justice Analysis
2. Administrative Record Index
3. Detailed Cleanup Contractor Estimate
4. Independent Government Cost Estimate

Cc: S. Ridenour, U.S. EPA, 5104A/B517F **(**Ridenour.Steve@epa.gov**)**
L. Nelson, U.S. DOI, **w/o Enf. Addendum,** (Lindy_Nelson@ios.doi.gov)
R. Osborn, IDEM, **w/o Enf. Addendum**, (email: ROSBORN@idem.IN.gov)

Bcc: [redacted]

BCC PAGE HAS BEEN REDACTED

NOT RELEVANT TO SELECTION

OF REMOVAL ACTION

ENFORCEMENT ADDENDUM

HAS BEEN REDACTED – THREE PAGES

ENFORCEMENT CONFIDENTIAL

NOT SUBJECT TO DISCOVERY

FOIA EXEMPT

NOT RELEVANT TO SELECTION

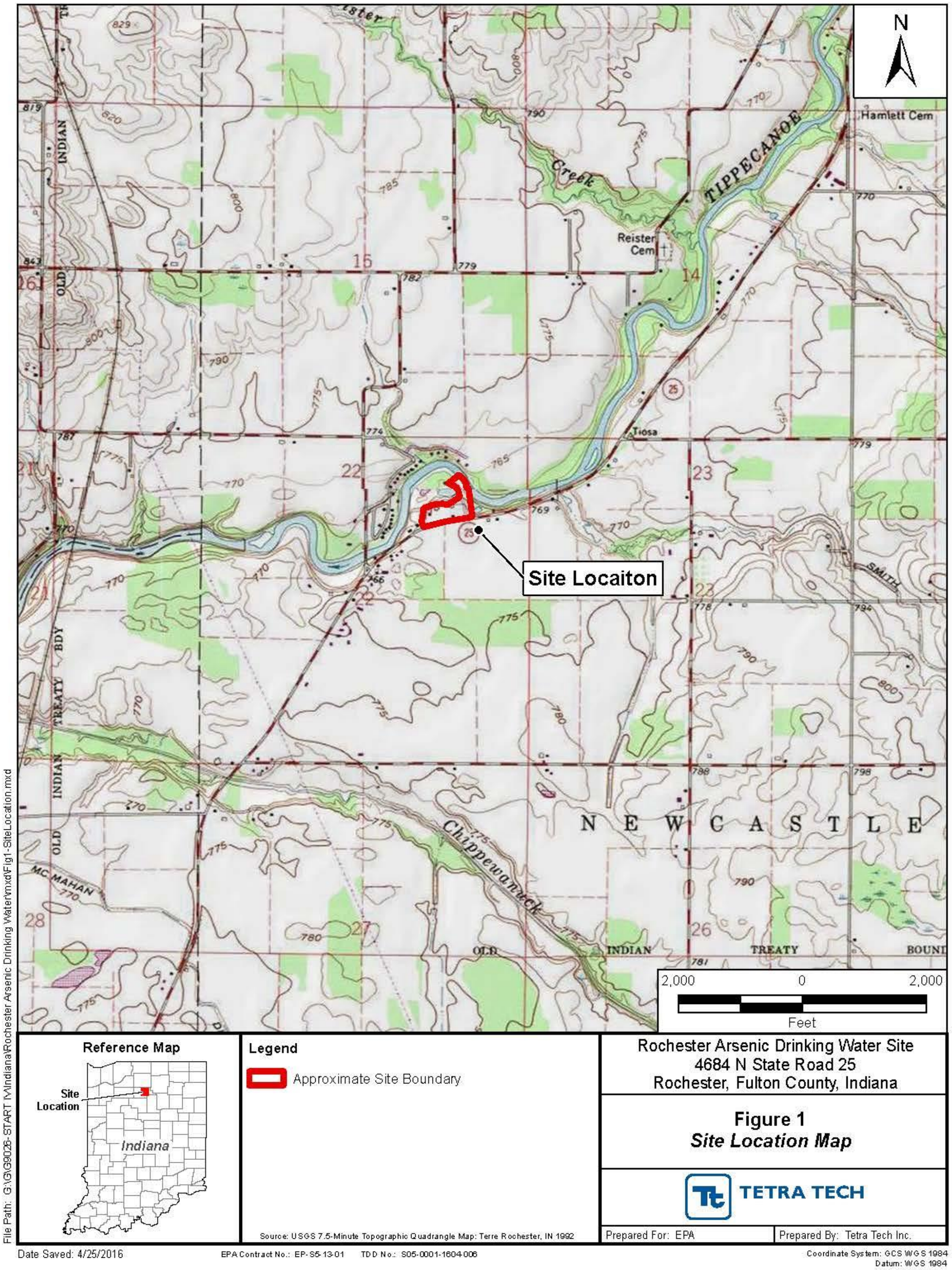
OF REMOVAL ACTION

FIGURE 1

U.S. ENVIRONMENTAL PROTECTION AGENCY
REMOVAL ACTION

SITE LOCATION MAP
FOR THE
RIVER PARK ARSENIC DRINKING WATER SITE
ROCHESTER, FULTON COUNTY, INDIANA

ORIGINAL
AUGUST, 2019


N
Hamlett Cem
TIPPECANOE
Creek
Reister Cem
Tiosa
Site Locaiton
SMITH
N E W C A S T L E
Chippewanuck
OLD INDIAN TREATY BDY
MC MAHAN
INDIAN
TREATY
BOUND
2,000 0 2,000
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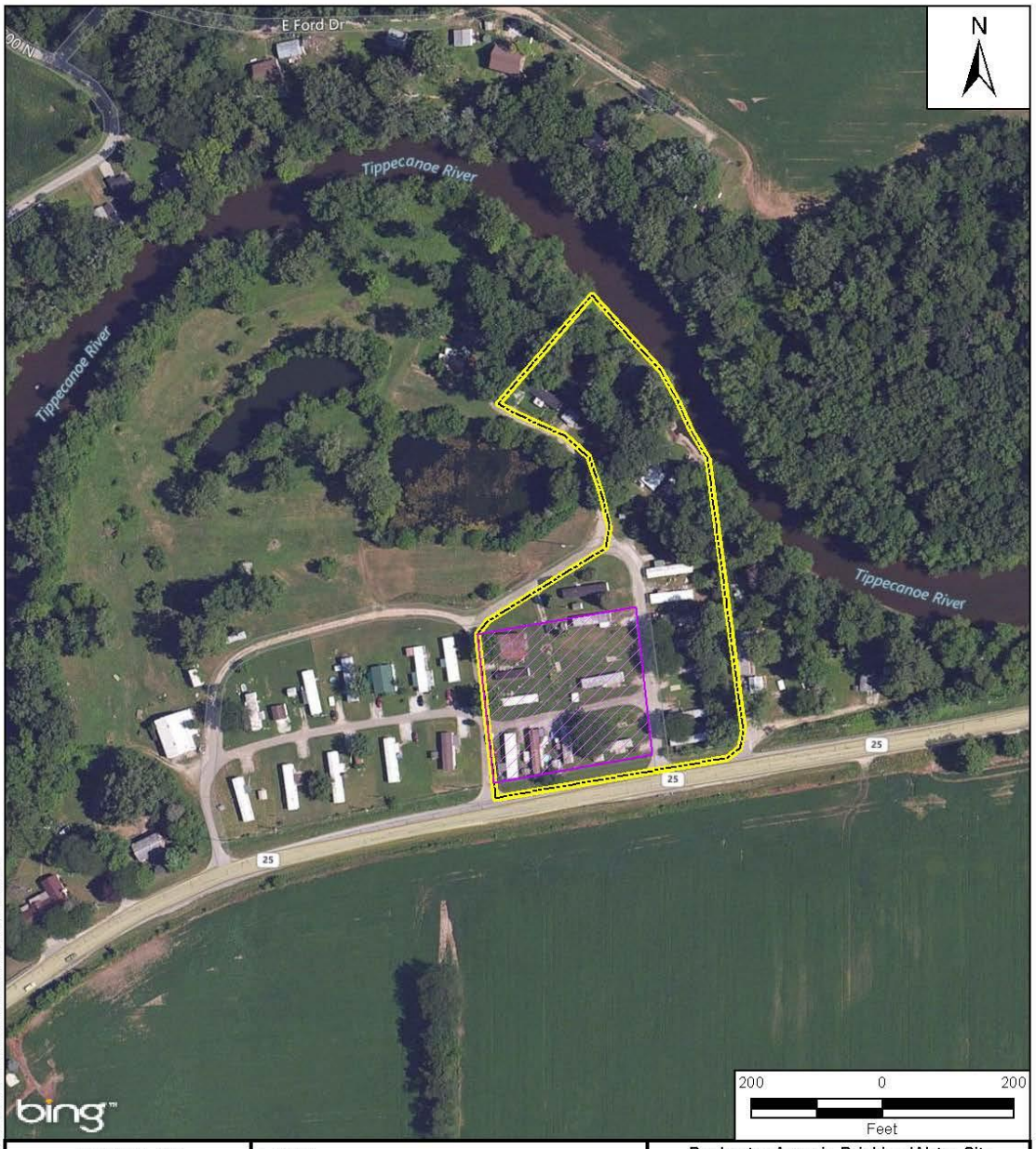
Reference Map
Site Location
Indiana
Legend
Approximate Site Boundary
Source: USGS 7.5-Minute Topographic Quadrangle Map: Terre Rochester, IN 1992
Rochester Arsenic Drinking Water Site
4684 N State Road 25
Rochester, Fulton County, Indiana
Figure 1
Site Location Map
TETRA TECH
Prepared For: EPA
Prepared By: Tetra Tech Inc.
File Path: G:\G\G9026-START IV\Indiana\Rochester Arsenic Drinking Water\mxd\Fig1-SiteLocation.mxd
Date Saved: 4/25/2016
EPA Contract No.: EP-S5-13-01
TDD No.: S05-0001-1604-006
Coordinate System: GCS WGS 1984
Datum: WGS 1984
Units: Degree

FIGURE 2

U.S. ENVIRONMENTAL PROTECTION AGENCY
REMOVAL ACTION

SITE LAYOUT MAP
FOR THE
RIVER PARK ARSENIC DRINKING WATER SITE
ROCHESTER, FULTON COUNTY, INDIANA

ORIGINAL
AUGUST, 2019



Reference Map

Legend

Suspected Former Apple Orchard

Approximate Site Boundary

Source: Bing Maps Hybrid 2013

Rochester Arsenic Drinking Water Site
4684 N State Road 25
Rochester, Fulton County, Indiana

Figure 2
Site Layout Map

TETRA TECH

Prepared For: EPA

Prepared By: Tetra Tech Inc.

File Path: G:\GIS\G9026-START IV\Indiana\Rochester Arsenic Drinking Water\mxd\Fig2-SiteLayout.mxd

Date Saved: 4/25/2016

EPA Contract No.: EP-S5-13-01 TDD No.: S05-0001-1604-006

Coordinate System: GCS WGS 1984
Datum: WGS 1984
Units: Degree

ATTACHMENT 1

U.S. ENVIRONMENTAL PROTECTION AGENCY
REMOVAL ACTION

ENVIRONMENTAL JUSTICE ANALYSIS FOR THE RIVER PARK ARSENIC DRINKING WATER SITE ROCHESTER, FULTON COUNTY, INDIANA

EJSCREEN Report (Version 2018)

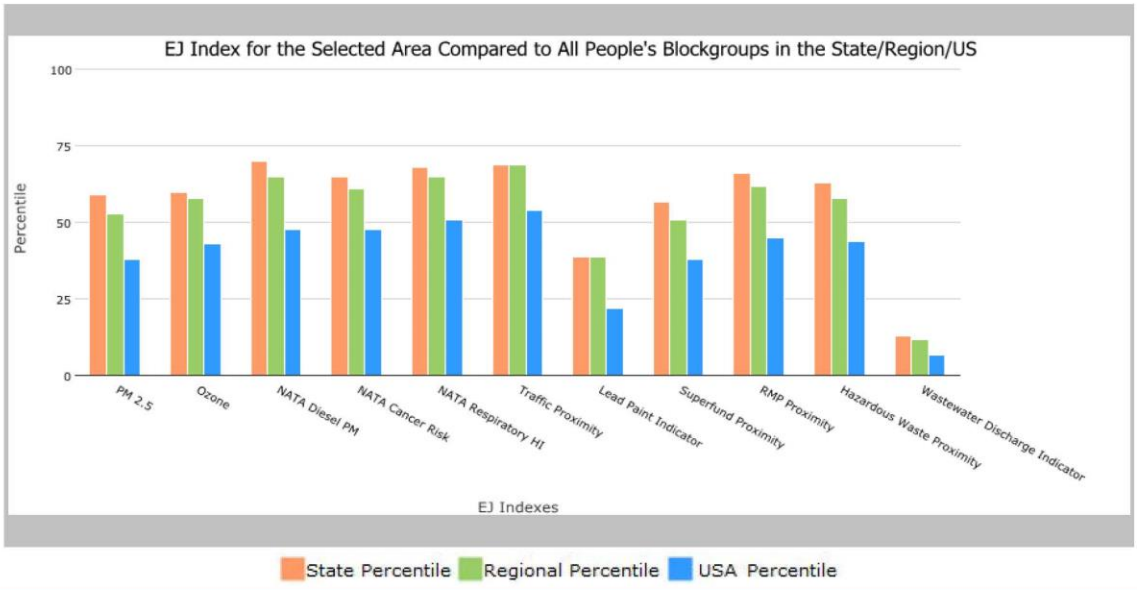
1 mile Ring Centered at 41.123603,-86.172575, INDIANA, EPA Region 5

Approximate Population: 246

Input Area (sq. miles): 3.14

RIVER PARK ARSENIC DRINKING WATER SITE

Selected Variables	State Percentile	EPA Region Percentile	USA Percentile
EJ Indexes			
EJ Index for PM2.5	59	53	38
EJ Index for Ozone	60	58	43
EJ Index for NATA* Diesel PM	70	65	48
EJ Index for NATA* Air Toxics Cancer Risk	65	61	48
EJ Index for NATA* Respiratory Hazard Index	68	65	51
EJ Index for Traffic Proximity and Volume	69	69	54
EJ Index for Lead Paint Indicator	39	39	22
EJ Index for Superfund Proximity	57	51	38
EJ Index for RMP Proximity	66	62	45
EJ Index for Hazardous Waste Proximity	63	58	44
EJ Index for Wastewater Discharge Indicator	13	12	7



This report shows the values for environmental and demographic indicators and EJSCREEN indexes. It shows environmental and demographic raw data (e.g., the estimated concentration of ozone in the air), and also shows what percentile each raw data value represents. These percentiles provide perspective on how the selected block group or buffer area compares to the entire state, EPA region, or nation. For example, if a given location is at the 95th percentile nationwide, this means that only 5 percent of the US population has a higher block group value than the average person in the location being analyzed. The years for which the data are available, and the methods used, vary across these indicators. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJSCREEN documentation for discussion of these issues before using reports.

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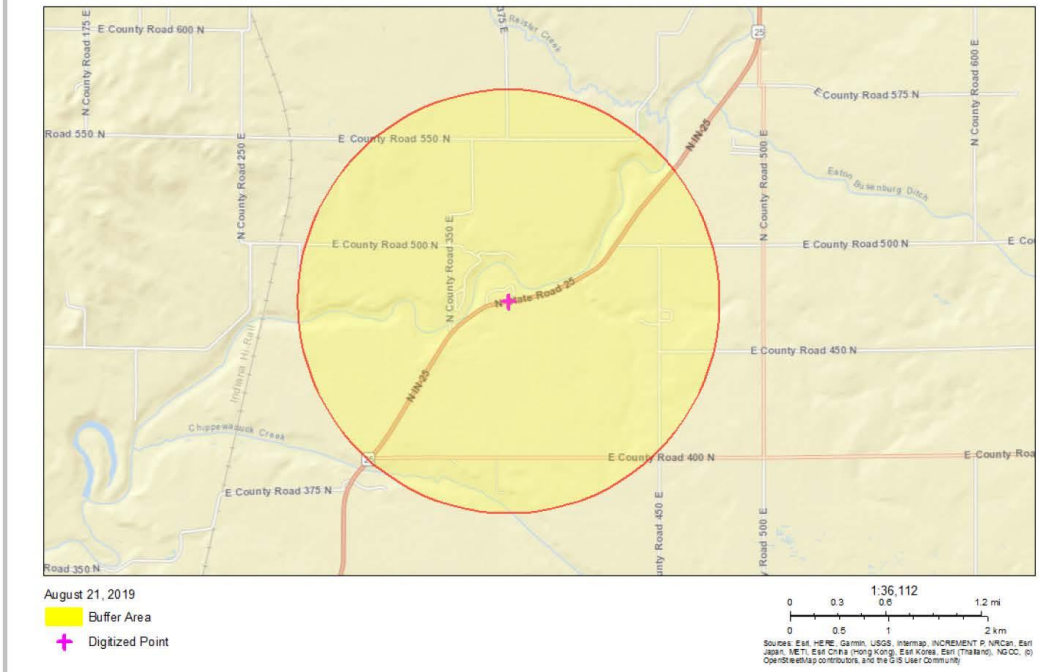
RIVER PARK ARSENIC DRINKING WATER SITE



Sites reporting to EPA	
Superfund NPL	0
Hazardous Waste Treatment, Storage, and Disposal Facilities (TSDF)	0

EJSCREEN Report (Version 2018)

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RIVER PARK ARSENIC DRINKING WATER SITE

Selected Variables	Value	State Avg.	%ile in State	EPA Region Avg.	%ile in EPA Region	USA Avg.	%ile in USA
Environmental Indicators							
Particulate Matter (PM 2.5 in µg/m^3)	11.8	11.8	47	10.8	75	9.53	90
Ozone (ppb)	41.6	42.9	17	42.6	24	42.5	41
NATA* Diesel PM (µg/m^3)	0.288	0.835	1	0.932	<50th	0.938	<50th
NATA* Cancer Risk (lifetime risk per million)	25	34	1	34	<50th	40	<50th
NATA* Respiratory Hazard Index	0.69	1.4	0	1.7	<50th	1.8	<50th
Traffic Proximity and Volume (daily traffic count/distance to road)	0.87	250	6	370	4	600	4
Lead Paint Indicator (% Pre-1960 Housing)	0.4	0.35	64	0.38	58	0.29	69
Superfund Proximity (site count/km distance)	0.041	0.16	36	0.12	44	0.12	44
RMP Proximity (facility count/km distance)	0.11	0.8	21	0.81	21	0.72	27
Hazardous Waste Proximity (facility count/km distance)	0.12	1.1	26	1.5	24	4.3	27
Wastewater Discharge Indicator (toxicity-weighted concentration/m distance)	0.054	0.3	83	4.2	84	30	88
Demographic Indicators							
Demographic Index	28%	27%	65	28%	63	36%	46
Minority Population	12%	20%	50	25%	45	38%	26
Low Income Population	44%	34%	70	32%	74	34%	70
Linguistically Isolated Population	0%	2%	63	2%	58	4%	44
Population With Less Than High School Education	28%	12%	92	10%	93	13%	87
Population Under 5 years of age	9%	6%	75	6%	78	6%	76
Population over 64 years of age	10%	14%	30	15%	29	14%	34

* The National-Scale Air Toxics Assessment (NATA) is EPA's ongoing, comprehensive evaluation of air toxics in the United States. EPA developed the NATA to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that NATA provides broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. More information on the NATA analysis can be found at: https://www.epa.gov/national-air-toxics-assessment.

For additional information, see: www.epa.gov/environmentaljustice

EJSCREEN is a screening tool for pre-decisional use only. It can help identify areas that may warrant additional consideration, analysis, or outreach. It does not provide a basis for decision-making, but it may help identify potential areas of EJ concern. Users should keep in mind that screening tools are subject to substantial uncertainty in their demographic and environmental data, particularly when looking at small geographic areas. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJSCREEN documentation for discussion of these issues before using reports. This screening tool does not provide data on every environmental impact and demographic factor that may be relevant to a particular location. EJSCREEN outputs should be supplemented with additional information and local knowledge before taking any action to address potential EJ concerns.

ATTACHMENT 2

U.S. ENVIRONMENTAL PROTECTION AGENCY
REMOVAL ACTION

ADMINISTRATIVE RECORD
FOR THE

RIVER PARK ARSENIC DRINKING WATER SITE
ROCHESTER, FULTON COUNTY, INDIANA

ORIGINAL
JUNE, 2020
SEMS ID:

NO.	SEMS ID	DATE	AUTHOR	RECIPIENT	TITLE/DESCRIPTION	PAGES
1	948499	Undated	Bugno, C., Fulton County Health Dept.	Property Owners	Letter re: Arsenic and Drinking Water from Private Wells	1
2	950627	11/30/2015	Indiana State Dept. of Health	Property Owner	Mobile Home Community Inspection Report (Violations)	1
3	950629	3/23/2016	Indiana Office of the Attorney General	Fulton County Clerk	Proposed Order, Petition for Emergency Order, CCS Entry Form w / Attachments	36
4	950644	4/13/2016	Shepherd, S., Fulton County Health Dept.	Boseman, A., U.S. EPA	Email with attached 1963 Aerial View Site Photo	1
5	950625	9/4/2018	Indiana State Dept. of Health	Property Owner	Mobile Home Community Inspection Report	1
6	955944	8/23/2019	Indiana State Dept. of Health	_ _ _ _ _	Inorganic and Metals Analysis Analytical Report	3
7	950628	8/26/2019	Renner, C., Tetra Tech, Inc.	Boseman, A., U.S. EPA	Summary of Findings Report - Revision 0 (Redacted)	455

NO.	SEMS ID	DATE	AUTHOR	RECIPIENT	TITLE/DESCRIPTION	PAGES
8	955943	9/5/2019	Andrews, S., Indiana Department of Environmental Management (IDEM)	Boseman, A., U.S. EPA	Letter re: Applicable or Relevant and Appropriate Requirements ARARs	2
9	955947	10/29/2019	Renner, C., Tetra Tech	Boseman, A., U.S. EPA	Summary of Findings Report - Revision 1 (Redacted)	447
10	955945	6/11/2020	Renner, C., Tetra Tech	Boseman, A., U.S. EPA	Letter Report (Revision 1) - Arsenic Speciation Sampling Results	32
11	_ _ _ _ _	_ _ _ _ _	Boseman, A., U.S. EPA	Borries, S., U.S. EPA	Action Memorandum - Request for Approval and Funding for a Time-Critical Removal Action (Pending)	_ _ _ _ _

ATTACHMENT 3

DETAILED CLEANUP CONTRACTOR AND START

COST HAS BEEN REDACTED – ONE PAGE

NOT RELEVANT TO SELECTION

OF REMOVAL ACTION

ATTACHMENT 4

INDEPENDENT GOVERNMENT COST ESTIMATE

HAS BEEN REDACTED – TWO PAGES

NOT RELEVANT TO SELECTION

OF REMOVAL ACTION